

Abstract

In a WDM optical communication system that includes a plurality of nodes interconnected by communication links, a node is provided which includes an optical coupling arrangement having at least one input port for receiving a WDM signal and a plurality of output ports for selectively receiving one or more wavelength components of the WDM optical signal. The optical coupling arrangement is adaptable to reconfigure its operational state to (i) selectively direct any one of the wavelength components received on the input port to any of the output ports independently of any other of the wavelength components and (ii) selectively direct any combination of two or more of the wavelength components from the input port to at least two of the output ports that serve as WDM output ports. At least one optical WDM interface is optically coupled to a first of the WDM output ports. The optical WDM interface is adapted to receive, at different times, a transponder and a transmission link through which a WDM signal can be communicated. At least one transponder is coupled to a second of the WDM output ports.